

## **REMARKS**

Favorable reconsideration and allowance of this application are requested.

### **1. Discussion of Claim Amendments**

At the outset, applicants are somewhat perplexed by the Examiner's statement that claims 13-14 are drawn to a "use of a shaped part" since the Preliminary Amendment filed concurrently with this application on January 25, 2006 changed such claims so that each was directed toward a shaped part per se. Thus, it appears that the incorrect claims were considered when formulating the subject Official Action.

In order to prevent further confusion on the record and to ensure that the claims going forward are in a form deemed appropriate by the applicants, the amendments originally proffered with the Preliminary Amendment dated January 25, 2006 along with other amendments intended to address remaining informalities therein noted by the Examiner have been presented above. In this regard, claims 12-14 have been canceled and other claims amended so as to respond to the issues raised by the Examiner.

Accordingly following entry of this amendment, claims 1-11 will remain pending herein for consideration.

### **2. Response to Specification Objection**

Appropriate application headings have been inserted into the specification. In addition, a brief description of drawing Fig. 1 has been inserted therein.

### **3. Response to Claim Objections**

The Examiner's helpful suggestions with regard to claims 2 and 8 have been adopted.

#### 4. Response to 35 USC §112 Rejection

Claim 3 has been changed so as to be dependent on claim 1 and to include language that complies with the statutory requirements of 35 USC §112.

#### 5. Response to 35 USC §§102(b) and 103(a) Rejections

The only issues remaining to be resolved in this application are the Examiner's rejection of claims 1-11 under 35 USC §102(b) as allegedly anticipated by or, in the alternatively, under 35 USC §103(a) as obvious over each of Burstein et al (USP 5,721,334) and Rastogi et al (USP 6,433,120). Applicants respectfully disagree.

In this regard, applicants note that the present invention is novel in several respects. For example, the present invention is novel in that a special process has been provided whereby parts may be made from *disentangled* UHMWPE – that is, disentangled UHMWPE which is synthesized in a special manner as described on page 4, line 34 to page 5, line 10 of the original specification in that it is made at a low temperature (<325K, preferably <300K) with an *unsupported* single site catalyst with a low catalyst concentration. The disentangled UHMWPE is therefore quite different from entangled UHMWPE in that it has a low G\* value of below 1.5 MPa, preferably below 0.75 MPa (see page 4, lines 6-10 of the original specification).

It is difficult to prepare disentangled UHMWPE because normally entanglements will be present due to:

- The use of heterogeneous or supported catalysts which have a high concentration of active centers (which will increase the chance of entanglements);
- High activity of active centers (high growth rate relative to crystallization rate, also leading to more entanglements);
- High monomer pressure (high growth rate); and

- High polymerization temperatures (slow crystallization, high growth rates)

Turning attention to the applied references, applicants note that Burstein discloses a process for sintering UHMWPE using as a starting material any commercial UHMWPE (see column 3, line 40). Burstein et al does not disclose or suggest sintering a *disentangled* UHMWPE. Instead, Burstein et al discloses sintering entangled UHMWPE as exemplified by 415 GUR resin commercially available from Hoechst Celanese. However, 415 GUR resin is *not* a disentangled UHMWPE, but instead is an entangled UHMWPE that would have a G\* value in excess of 1.5 MPa.

Rastogi et al is similarly deficient. In this regard, Rastogi et al discloses a process for processing UHMWPE having a certain lamellar thickness and melting temperature. An exemplified UHMWPE is Hostalen GUR 4130 resin. Like the 415 GUR resin disclosed in Burstein et al reference, the GUR 4130 resin is *not* a disentangled UHMWPE, but instead is an entangled UHMWPE that would have a G\* value in excess of 1.5 MPa.

Therefore, neither Burstein et al nor Rastogi et al anticipate or render obvious the present invention. Withdrawal of the rejections advanced against claims 1-11 based thereon is therefore in order.

**6. Fee Authorization**

The Commissioner is hereby authorized to charge any deficiency, or credit any overpayment, in the fee(s) filed, or asserted to be filed, or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Account No. 14-1140.

Respectfully submitted,

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